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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

FOUD, HICHAM B

ART UNIT

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2419

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/520,758	Applicant(s) IOCHI ET AL.	
	Examiner HICHAM B. FOUAD	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed on 11-19-2008 has been entered and considered.

Claims 14-30 are pending in this application.

Claims 1-13 have been canceled.

Claims 25-30 have been added.

Claims 14-30 remain rejected as discussed below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 14, 16, 17, 20-24, 25 and 27-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Karjalainen (US 2002/0176438).

For claim 14, Karjalainen discloses a radio base station apparatus that communicates with a communication terminal, the radio base station apparatus comprising a transmission signal former that multiplexes a plurality of types of control information for a single communication terminal for use in uplink packet transmission (see Figure 4 elements 408; MUX which multiplexed the control information 400A), using a single spreading code (see Figure 4 element 406A and [0021] lines 11-12;

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selection of a single spreading code per user) and a plurality of symbol patterns that differ between the plurality of types of control information (see Figure 4 elements 408; Scramble; the use of scramble codes), and forms transmission signals (see Figure 4; the output of element 408).

For claim 16, Karjalainen discloses a radio base station apparatus that communicates with a communication terminal, the radio base station apparatus comprising a multiplexer that multiplexes a plurality of types of control information for a plurality of communication terminals for use in uplink packet transmission, using a spreading code and symbol patterns in a plurality of combinations, said plurality of types of control information being provided per communication terminal (see Figure 4 elements 408; MUX which multiplexed the control information 400A after spreading and scrambling), wherein the multiplexer multiplexes the plurality of types of control information for a single communication terminal using a single spreading code (see Figure 4 element 406A and [0021] lines 11-12; selection of a single spreading code per user) and a plurality of symbol patterns that differ between the plurality of types of control information (see Figure 4 elements 408; Scramble; the use of scramble codes).

For claim 17, Karjalainen discloses a radio network controller apparatus comprising an assigner that assigns a spreading code and symbol patterns in a plurality of combinations to a plurality of types of control information for a plurality of communication terminals for use in uplink packet transmission (see Figure 3; RNC and see [0029] lines 13-25), said plurality of types of control information being provided per communication terminal, wherein the assigner assigns a single spreading code (see

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Figure 4 element 406A and [0021] lines 11-12; selection of a single spreading code per user) and a plurality of symbol patterns to the plurality of types control information for a single communication terminal (see Figure 4 elements 408; Scramble; the use of scramble codes).

For claim 20, Karjalainen discloses communication terminal apparatus comprising: a despreader that despreads a signal from a radio base station apparatus using a single spreading code provided for a single communication terminal apparatus (see Figure 4 element 428; see [0034] lines 12-15 and [0021] lines 11-12; selection of a single spreading code per user); a decoder that extracts a plurality of types of control information using symbol patterns provided from the radio base station apparatus, said plurality of types of control information for the communication terminal apparatus being multiplexed in the signal using a plurality of symbol patterns (see Figure 4 element 428; Descramble; using the same scramble code at the transmission side for each control information); and a transmission signal former that forms uplink transmission packets based on the plurality of types of control information extracted by the decoder (the transmission signal former that uses the received control information for uplink transmission is inherent in the communication terminal for the purpose of communication to the base station).

For claim 21, Karjalainen discloses a communication terminal apparatus, wherein the plurality of types of control information comprise at least one of a packet transmission rate, a coding rate, a spreading factor, the number of spreading codes, a

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modulation scheme, a packet data size, a transmit power, and information about retransmission (see [0031]).

For claim 22, Karjalainen discloses a transmission signal generation method comprising: encoding a plurality of types of control information for a single communication terminal using a plurality of symbol patterns that differ between the plurality of types of control information (see Figure 4 elements 402A; Channel encoder and [0033]); and spreading the plurality of types of control information after the encoding using a single common spreading code (see Figure 4 elements 406A).

For claim 23, Karjalainen discloses a method of receiving a plurality of types of control information for a communication terminal, the method comprising: despreading a received signal using a single spreading code common to the plurality of types of control information (see Figure 4 element 428 and see [0034] lines 12-15 and [0021] lines 11-12; selection of a single spreading code per use)r; and decoding the signal after the despreading using a plurality of symbol patterns that differ between the plurality of types of control information (see Figure 4 element 422; channel decoder).

For claim 24, Karjalainen discloses a radio communication system that transmits a plurality of types of control information for a single communication terminal for use in uplink packet transmission, the radio communication system comprising a radio network controller apparatus, a radio base station apparatus, and a mobile station apparatus (see Figure 3), wherein: the radio network controller apparatus designates a plurality of symbol patterns, which differ between the plurality of types of control information, and a

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spreading code common to the plurality of types of control information for the radio base station apparatus and the mobile station apparatus (see Figure 3; RNC and see [0029] lines 13-25 and [0021] lines 11-12; selection of a single spreading code per user); the radio base station apparatus transmits the plurality of types of control information to a single mobile station apparatus using the plurality of symbol patterns (see Figure 4 elements 408; Scramble; the use of different scramble codes or Channel encoder "element 402A") and the spreading code (see Figure 4 element 406A and [0021] lines 11-12; selection of a single spreading code per user); and the mobile station apparatus extracts the plurality of types of control information using the plurality of symbol patterns and the spreading code (see Figure 4 element 428; despreaders, descramblers and decoder and see [0034] lines 12-15).

For claims 25 and 27-30, Karjalainen further discloses wherein the plurality of symbol patterns are mutually uncorrelated (see Figure 4 elements 408; Scramble; the use of scramble codes; the scrambled signals are multiplexed at the transmission but separable at the receiving side which reads on mutually uncorrelated "see [0128] of the instant application").

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 15, 18, 19 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karjalainen in view of Atarashi et al (US 7,298,721).

For claim 15, Karjalainen discloses a radio base station apparatus that communicates with a communication terminal, the radio base station apparatus comprising: a first transmission signal former that spreads transmission data for a first communication terminal using a first spreading code assigned to said first communication terminal and forms a first dedicated channel signal for said first communication terminal (see Figure 4 element 406B and [0021] lines 11-12; selection of a single spreading code per user), and that spreads transmission data for a second communication terminal using a second spreading code assigned to said second communication terminal and forms a second dedicated channel signal for said second communication terminal (see Figure 4 element 406A and [0021] lines 11-12; selection of a single spreading code per user); and a second transmission signal former that multiplexes a plurality of types of first control information for the first communication terminal and a plurality of types of second control information for the second communication terminal (see Figure 4 element 406A and [0021] lines 11-12; selection of a single spreading code per user), and a plurality of symbol patterns that differ between the plurality of types of first control information and between the plurality of types of second control information (see Figure 4 elements 408; Scramble; the use of different scramble codes) and that forms transmission signals for the first and second communication terminals (see Figure 4; the output of element 408). Karjalainen discloses all the subject matter with the exception of using for the control information for

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both communication terminals a third spreading code, which is provided for common use by the first and second communication terminals. However, Atarashi et al discloses the use of one specific spreading code for common control channel for a plurality of users (see Figure 44 and column 22 lines 9-14). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the common control channel as taught by the invention of Atarashi et al into the invention of Karjalainen for the purpose of avoiding over-consumption of spreading codes.

For claim 19, Karjalainen discloses an apparatus wherein the plurality of types of control information comprise at least one of a packet transmission rate, a coding rate, a spreading factor, the number of spreading codes, a modulation scheme, a packet data size, a transmit power, and information about retransmission (see [0031]).

For claim 18, Karjalainen in view of Atarashi et al discloses all the subject matter with the exception of: a first transmit power controller that controls transmit power of dedicated channel signals on a per dedicated channel basis; and a second transmit power controller that controls a transmit power of the plurality of types of first control information and a transmit power of the plurality of types of second control information, according to a transmit power of a dedicated channel for the first communication terminal and a transmit power of a dedicated channel for the second communication terminal, respectively. However, an official notice is taken for the use of different transmission power controller for the dedicated channel and control channel or the use of only one controller depending on the design preference. Thus, it would have been obvious to the one skill in the art at the time of the invention to uses different

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transmission power for the dedicated channel and the control channel for the purpose of differentiating between the types of the user data transmitted.

For claim 26, Karjalainen further discloses wherein the plurality of symbol patterns are mutually uncorrelated (see Figure 4 elements 408; Scramble; the use of scramble codes; the scrambled signals are multiplexed at the transmission but separable at the receiving side which reads on mutually uncorrelated "see [0128] of the instant application").

Response to Argument

4. Applicant's arguments filed have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., distinguishing each type of control information by preset multiplexing rules so that spreading code resources may be conserved rather than used to distinguish the control information types (see Remarks page 9); and the Applicants' claimed subject matter spreads each of a plurality of types of control information using the same spreading code and **modulates** each of the plurality of types of control information with a different symbol pattern (see page 10)) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Moreover, the applicant is using [0001] of Karjalainen to show the difference between the claimed subject matter and the reference. However, [0001] is only a brief

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description of the field of the invention and not the invention. Therefore, this lacks argument. Furthermore, the argued term “modulates” is not even found in the claims. Finally, the argued limitations are: using a single spreading code (see Figure 4 element 406A and [0021] lines 11-12; selection of a single spreading code per user) and which means that the control information designated for each user will use a single spreading code and that reads on the above claimed limitation, and a plurality of symbol patterns that differ between the plurality of types of control information (see Figure 4 elements 408; Scramble; the use of scramble codes), because even if we assume that there is only one scrambling code by base station, the scrambled control information signals will donate a plurality of symbol patterns that differ between the plurality of types of control information because the control information are different and even when scrambled with the same scrambling code will generate a plurality of symbol patterns that differ between the plurality of types of control information and that reads on the claimed limitation “a plurality of symbol patterns that differ between the plurality of types of control information”. Therefore, the argued limitations are very broad and if a claim is subject to more than one interpretation, at least one of which would render the claim unpatentable over the prior art, the examiner should reject the claim over the prior art based on the interpretation of the claim that renders the prior art applicable. *Ex parte Ionescu*, 222 USPQ 537 (Bd. Pat. App. & Inter. 1984). *In re Wilson*, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). Hence, claims are given their broadest reasonable interpretation (The Federal Circuit's *en banc* decision in *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005)).

In regard of claims 15-30, the applicant lacks argument.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. In the case of amending the claimed invention, Applicant is

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respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

When responding to this office action, applicants are advised to clearly point out the patentable novelty which they think the claims present in view of the state of the art disclosed by the references cited or the objections made. Applicants must also show how the amendments avoid such references or objections. See 37C.F.R 1.111(c). In addition, applicants are advised to provide the examiner with the line numbers and pages numbers in the application and/or references cited to assist examiner in locating the appropriate paragraphs.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HICHAM B. FOUOD whose telephone number is (571)270-1463. The examiner can normally be reached on Monday - Friday 10-6 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hicham B Foud/
Examiner, Art Unit 2419
03/11/2009

/Wing F. Chan/
Supervisory Patent Examiner, Art Unit 2419
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